

DAY 1 CONVECTIVE OUTLOOK

NWS STORM PREDICTION CENTER NORMAN OK  
1250 AM CDT SAT MAY 09 2009

VALID 091200Z - 101200Z

...THERE IS A SLGT RISK OF SVR TSTMS THIS AFTN AND EARLY EVE ACROSS PARTS OF NE PA/ERN NY INTO WRN NEW ENGLAND...

...SYNOPSIS...

SEASONABLY STRONG BROADLY CYCLONIC MID/UPPER FLOW WILL PERSIST ACROSS THE NORTHERN AND CENTRAL TIER OF THE U.S. THROUGH THIS FORECAST PERIOD. HOWEVER...MODELS SUGGEST THAT THE PRIMARY EMBEDDED JET CORE...NOW NOSING THROUGH THE NORTH CENTRAL STATES...WILL CONTINUE TO DEVELOP EAST NORTHEASTWARD THROUGH THE NORTHEASTERN STATES AND CANADIAN MARITIMES. A STRONG MID-LEVEL SHORT WAVE IMPULSE ACCOMPANYING THIS FEATURE IS PROGGED TO SPREAD ACROSS THE LOWER GREAT LAKES REGION THIS AFTERNOON...BEFORE CONTINUING EASTWARD INTO NEW ENGLAND BY LATE TONIGHT/EARLY SUNDAY. THIS WILL ALSO BE ACCOMPANIED BY A SIGNIFICANT SURFACE LOW...WITH A TRAILING SURFACE FRONT NOSING DEEPER INTO THE SOUTHERN PLAINS... AND EAST/SOUTHEASTWARD INTO THE GULF STATES AND ATLANTIC SEABOARD BY THE END OF THE PERIOD.

HIGHER MOISTURE CONTENT AIR REMAINS GENERALLY SUPPRESSED TO THE SOUTH OF THE MAIN SURFACE FRONT...IN THE WAKE OF A SIGNIFICANT CONVECTIVELY GENERATED OR ENHANCED IMPULSE NOW SHIFTING INTO/ ACROSS MID ATLANTIC COASTAL AREAS. MOISTURE MAY NOT IMPROVE MUCH TO THE NORTH OF THE LOWER OHIO/TENNESSEE VALLEYS AND MID ATLANTIC REGION TODAY...BUT SUFFICIENT MOISTENING HAS ALREADY OCCURRED ACROSS THE NORTHEAST TO SUPPORT INCREASING CONVECTIVE POTENTIAL.

...NEW YORK/PENNSYLVANIA INTO PARTS OF WRN NEW ENGLAND...

AS A 70-90 KT 500 MB JET STREAK PROGRESSES ACROSS MUCH OF THE NORTHEAST TODAY...STRONGEST MID LEVEL FORCING ASSOCIATED WITH THE VIGOROUS SHORT WAVE IMPULSE APPEARS LIKELY TO SPREAD TO THE LEE OF LOWER GREAT LAKES...ACROSS THE NORTH CENTRAL APPALACHIANS DURING THE PEAK HEATING HOURS. ALTHOUGH DESTABILIZATION MAY BE WEAK TO LOCALLY MODERATE AT BEST...THIS SHOULD BE SUFFICIENT TO SUPPORT SCATTERED SUSTAINED CONVECTIVE ACTIVITY IN THE PRESENCE OF FAVORABLE DEEP LAYER SHEAR FOR SEVERE STORMS...INCLUDING SUPERCELLS. ACTIVITY MAY EVENTUALLY CONSOLIDATE INTO A GROWING STORM CLUSTER AS IT SPREADS TOWARD WESTERN/SOUTHERN NEW ENGLAND...BUT THE LOSS OF DAYTIME HEATING PROBABLY WILL RESULT IN DIMINISHING INTENSITY TRENDS AS IT DOES...DURING THE EVENING/OVERNIGHT HOURS.

13Z

...THERE IS A SLGT RISK OF SVR TSTMS OVER PARTS OF NY AND NEW ENGLAND...

...NY/MA/VT/NH...

A COMPACT UPPER TROUGH IS CURRENTLY MOVING ACROSS LOWER MI...AND WILL BEGIN TO AFFECT NY AND NEW ENGLAND BY EARLY AFTERNOON. SCATTERED THUNDERSTORMS ARE LIKELY TO INTENSIFY IN THIS REGION AS

COMBINATION OF DAYTIME HEATING AND SURFACE DEWPOINTS IN THE 50S  
YIELD MLCAPE VALUES OF 500-1000 J/KG. FAST-MOVING STORMS CAPABLE OF  
DAMAGING WINDS AND HAIL WILL SPREAD FROM CENTRAL/EASTERN NY INTO  
CENTRAL NEW ENGLAND BY LATE AFTERNOON. ISOLATED SUPERCELLS WILL  
ALSO BE POSSIBLE DUE TO FAVORABLE LOW LEVEL AND DEEP LAYER VERTICAL  
SHEAR...WITH A RISK OF A TORNADO OR TWO.

16Z

...THERE IS A SLGT RISK OF SVR TSTMS OVER PARTS OF NY AND NEW  
ENGLAND...

...NY/MA/VT/NH...

REF MCD 778

SURFACE LOW SWRN ONTARIO WILL DEEPEN AND TRACK ALONG ST LAWRENCE  
VALLEY TO NRN NH BORDER BY THIS EVENING...AS AN IMPRESSIVE WIND MAX  
DRIVES EWD ACROSS NY/PA TO SRN ENGLAND. AIR MASS CURRENTLY  
DESTABILIZING ACROSS NY AS MID LEVEL COOLING AND SURFACE HEATING  
WORK ON AVAILABLE MOISTURE TO DEVELOP MLCAPES TO 1000 J/KG BY MID  
AFTERNOON. THUNDERSTORMS WHICH HAVE BEEN ACTIVE JUST N OF BORDER IN  
WRN NY THIS AM WILL DEVELOP ALONG AND S OF LAKE ONTARIO COAST AS  
WELL AS ERN LAKE ERIE BY EARLY THIS AFTERNOON. WITH DEEP LAYER  
SHEAR OF 60-70K...DAMAGING WINDS ARE INITIALLY THE PRIMARY THREAT AS  
STORMS MOVE RAPIDLY EWD ACROSS UPSTATE NY. BY MID/LATE AFTERNOON AS  
LOW CONTINUES TO DEEPEN TO N LOW LEVEL SHEAR WILL BECOME  
INCREASINGLY FAVORABLE FOR SUPERCELLS ERN NY INTO WRN NEW ENGLAND.  
THIS WILL ENHANCE BOTH THE DAMAGING WIND THREAT AS WELL AS INCREASE  
TORNADO POTENTIAL.

20Z

...THERE IS A SLGT RISK OF SVR TSTMS ACROSS PORTIONS OF ERN NY/NERN  
PA/NRN NJ AND ADJACENT AREAS OF NEW ENGLAND...

...THERE IS A SLGT RISK OF SVR TSTMS FROM THE DELMARVA REGION SWWD  
ACROSS THE CAROLINAS...AND THEN WWD INTO TX...

...NY/NRN PA AND INTO NEW ENGLAND...

WIDESPREAD STRONG/SEVERE STORMS CONTINUE MOVING EWD ACROSS NY AND  
ADJACENT NRN PA/NWRN VT ATTM...AHEAD OF A STRONG MID-LEVEL  
SHORT-WAVE TROUGH AND ASSOCIATED SURFACE SYSTEM. DESTABILIZATION  
HAS BEEN LIMITED THIS AFTERNOON...BUT IS BEING OFFSET BY THE  
STRENGTH OF THE STORM SYSTEM AND ACCOMPANYING FAVORABLE WIND FIELD.  
DEGREE OF SHEAR SHOULD CONTINUE TO SUPPORT ORGANIZED/SEVERE STORMS  
THROUGH AT LEAST EARLY EVENING...BEFORE DIURNAL EFFECTS BEGIN TO  
SUPPORT WEAKENING CONVECTION. UNTIL THEN...THE POTENTIAL FOR  
DAMAGING WINDS AND HAIL -- ALONG WITH AN ISOLATED TORNADO OR TWO --  
WILL CONTINUE/SPREAD EWD ACROSS THIS REGION.